A spatial Approach to Towns (Gaul, 300-950)

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I am very honoured to have been invited by Pr Michael McCormick to give a lecture in Harvard University on the archaeology of Early medieval Towns. I shall try to make complicated things as clear as possible. I do not come to you with answers but with questions on many aspects linked to towns as spaces. Sometimes it will take us a bit far away from the main question but the shortest way is not always the best.

Archaeologists at work in towns

In the last 50 years archaeology has produced an unrivalled amount of new data all over Europe about ancient and medieval towns. These data have changed our knowledge of many aspects of town planning, land use, life styles, private and public architecture, domestic equipment, funerary practices, industry, trade and commerce and so on. But they have not deeply changed our conception of towns *per se*, in and of themselves. Most of the time we have not fully turned data into information useful for the study of urbanism. This information should lead us to a reconsideration of our knowledge and approach to the structural aspects of towns.

We know that the transformation of towns parallels the general mutation of societies. So urban change and social change can be looked upon as coherent subjects that archaeology documents best in the 1st millennium through studying the transformation of urban space.

I will concentrate on an archaeological approach to towns as a social phenomenon. And I will mainly refer to Gaul from c. 300 to c. 950. A model can be proposed for these towns as a starting point.

We see towns as central places for a mainly rural population in an agrarian economy. The dates 300 and 950 correspond to major changes in the structure of towns. Around 300 the *civitas* capitals, the provincial administrative centers of Roman Gaul were turned into smaller walled towns and the Church started to take them over. By 950, commercial activity and lordship were to dominate the scene. A new structure was being established around the castles or the monasteries and in the parishes.

But 300 and 950 also correspond more or less to an artificial period imposed in the soil, that of “Dark earth” a distinctive dark soil layer in towns which often appears homogeneous.
For these centuries, a useful archaeological question could be: who lived in towns and for which purpose?

Bearing in mind the postulate that spatial structure is a reliable reflector of social or societal structure, it appears that ancient and medieval towns of Roman origin in the West share the characteristic of being continuous spatial entities inside their town limits while they present a totally different aspect in the intervening centuries. Then they appear like archipelagos of scattered nucleated settlements. This simple but new fact produces a special, distinctive period for towns between Antiquity and the Middle Ages.
Very likely this period should not be defined merely as a transitional process, as the end of the Roman town and the establishment of the medieval one, but also by its own distinctive features. This is a historical challenge which requires specifically designed research projects at the town level. So far the comparison of individual pieces of thematic evidence collected from different towns has not solved the problem.
In order to progress, we need to understand the dynamics of as many French but also European towns as possible. Experience has shown that short-term historical questions and long-term ones necessitate different parallel approaches.
These aspects are the aspects of the spatial development of towns between 300 and 950 I shall stress.

If we turn to the question why late Roman and Early medieval towns have been archaeologically underestimated, we can formulate a set of statements which are related to the materiality of towns:
- the town as it appears to archaeologists is concrete, material, made of recognizable features. Thus visibility is a clue.
- also, archaeologists work from movable and immovable remains and they are supposed to be well aware that remains are the exception as, in fact, the greatest part of built structures was dismantled to be reused and most of the artefacts were reworked or recycled one way or another.
- since urban archaeology has been developed in Europe as the study of towns over time, historical topography has been promoted as the first interpretation and summary of knowledge by means of reconstructed town plans of all periods according to a largely accepted semiology that is based on visible remains, that is, based on either architecture still standing above ground level or the archaeological discovery of buried remains.

As a consequence, street patterns, defensive systems, public buildings whether civil or religious, private houses, craft workshops, and cemeteries are the most common categories of urban features. These urban features are of different shapes, materials and uses through time, but the interpretative framework remains the same during the two millennia or more that pre-industrial urbanism lasted.
These concrete features represent both a town and its size: they speak of quality and quantity; they speak of status and figures.
- Certain features like a forum or a cathedral distinguish a place in an urban hierarchy, symbolize the Roman *civitas* capital or the medieval bishopric.
- Varied specialised workshops define urban industrial activity and demography.
- Houses illustrate activities and social hierarchy, and so on.
The more features and the greater their variety, the bigger the town. Representations of Roman towns on one hand, of Medieval ones on the other show a concentration of known urban features clearly indicating an urban way of life to us.
On the other hand, the intermediate period just shows inherited town walls of Late Roman date, a few ecclesiastical or aristocratic buildings, scattered traces of domestic occupation and, above all, what is taken for emptiness in the form of Dark earth.

Another main reason for underestimating post-Roman towns is due to the belief in textual evidence. The main lines of the interpretation of towns have long been based on a simple acceptance of what the written evidence says. In Gaul, towns of the so called age of transition have consequently appeared as permanent political and ecclesiastical centres with no urban life.
This vision still influences the archaeologists producing the only new evidence. We act as if some 6 centuries out of a total of 20 were almost a-historical, and our formal debate mainly is based on disruption or continuity. This leads to a dead-end. So archaeologists will have to evolve in their approach to the historical question: change should be their main concern.

In all the fields of historical research into this period a main challenge concerns the gaps in the evidence. Silence in the written sources which arises from disinterest in matters which are crucial to us, as well as vanished architecture, or the reuse of artefacts, or the reworking of stratification by later activity, or the remodelling of town plans are some aspects of this situation.
At the end of the recent century we have realised that we needed more critical distance between us and the sources or the evidence. I do not refer here to post-modern approaches but to scholarly criticism of the written sources which shows how the condition of their production weighed on what was written. Archaeologists have also started to be very critical

about the interpretation of remains and the difficult question of estimating the vanished evidence.

It must therefore be stressed that when we deal with historical spaces we cannot rely uncritically on the surviving evidence and trust the sources alone because they lack so much information, because there are so many losses and distorsions.
Archaeologists working in towns are still very reluctant to accept the idea that elements which are not or are no longer in the records necessarily existed. Whether documented or not, indispensable aspects of everyday life will have to be taken into account, and at least formulated as questions before setting a research agenda. It is thus an urgent matter to ask the proper questions and not just expect the evidence to speak for itself.
Broadly speaking, the main, urgent questions deal with social structure and modes of production, in so far as urban space is concerned.

We also need shared frames of interpretation in order to give sense to our discoveries, to make things intelligible. Two of these frames concern our approach to types of networks and to types of towns.

Structural positions and networks

There is no social need or possibility for towns to develop, unless they are part of larger contexts in which they are a necessity. Towns must therefore be sub-systems in larger systems and a distinction can be established between structural positions (urban armatures or frameworks) and networks.

In French-speaking geographical analysis a structural position is of administrative origin, tightly linked to some sort of centralised authority. Occupying a structural position for a town implies an individual position in a long term system. The Roman Empire and the Capetian realm are good examples of such centralised systems. Statistically it is established in France that towns which were placed in an administrative structure preserved their position for centuries, whatever else happened.

Towns also belong to networks which can be defined as less rigid systems than administrative structures. Networks are based on trade and exchanges and as such they are determined by large scale economic conditions.

Here towns have to find their individual places in different networks. They do so according to their individual ability to fulfil the necessary conditions of their time in producing and circulating goods.

The Emporia of the Early Middle Ages from the Baltic to the English Channel and the Hanseatic towns in Northern Medieval Europe are good examples of supra-regional networks adapted to their time.

In short, we could say that two main distinctions are to be established between structural position and networks. The first one is that long-distance information circulates through positional structures as abstract or "light" data, such as commands or letters, with no compulsory need for numerous or specific urban buildings, while concrete and "heavy" goods circulate in networks, so that towns in networks need specific and numerous structures like harbours, warehouses, merchants' houses, workshops, markets and so on.

The second distinction is that towns in a positional structure necessarily are given a place by a central authority, each town being in a position of domination and subordination with respect to other ones ; very differently the place of each town in a network is more subtle and is not fixed.

This has an impact on the structure of individual towns as the needs for space and inhabitants are totally different. This distinction is certainly of methodological interest since it helps establishing real types of towns in the past.

Functional analysis and types of towns

Since it is now clear that towns necessarily belong to systems of various natures which determine their history or individual trajectory and physical aspect, we can come to the town in itself through time.

It is largely accepted that towns are the result of three main factors: politics, economy and as a consequence of the first two, demography. This triad gives a framework which allows us to interpret the poorest remains. Under the term politics stand various realities like military, defensive, judicial, cultural or religious aspects.

Archaeological reasoning as it appears from archaeological literature goes from concrete data coming from the soil to their integration into general explicative systems, whether political or economic. The process of interpretation follows more or less 3 main phases.

The first one is concerned with the value of archaeological data for the urban topography.

For instance, butchery carcasses stand for butchers' activity and thus for the victualling of the town and then for its local economy.

The second phase is characterised by the functional interpretation at town scale of the archaeological features. Material evidence is distributed into three categories of functions:

- *usual functions* as far as archaeological features reveal a need of collective everyday life in a complex group defined by the specialisation of tasks: the butcher needs the carpenter who needs the potter; they all need the priest who needs them all, and so on.
- *developed functions* as archaeological features reveal a type of activity related to a particular position of the town in relationship with outside. For instance, proximity to specific natural resources like iron or medicinal water or on a fluvial crossing point. This reminds us of networks.
- *administrative functions* when archaeological features reveal that a centralised state decided to settle its representatives in the town. This reminds us of structural positions.

Developed and administrative functions determine the number and variety of the usual functions which cannot spring up on their own. The more inhabitants there are who are occupied in specific tasks related to import and export, to transit or to control, the more inhabitants are needed for everyday life. Demographic growth results thus from developed and administrative functions, not from usual ones.

The crucial problem in archaeology is often how to decide if archaeological features give evidence for usual or for developed functions. Towns in commercial networks generate more population than towns that are centres of solely administrative activity. Each type does not attract the same kinds of population and each type does not require the same sorts of services either.

The third phase of interpretation consists in measuring the importance of the town by the extent of its control of the local economy and by its long distance commercial activity.

These two sets of questions or matters about structural positions, networks and functional analysis cannot be avoided. They are a both a preliminary and an interpretative framework for any topic dealing with town dynamics, with urban and social change.

In archaeological reasoning, functional analysis so far has proved, or is recognized, to be the best way of describing the concrete components of a town in a topographical and chronological perspective. It works well in periods when towns occurred in societies where both commerce and control were tightly bound to towns as compulsory go-betweens. The inevitable conclusion would be that there were no towns as such in the intermediate centuries between the Roman empire and the central Middle Ages.

The current hypothesis among archaeologists is that the Early medieval urban system was based on polyfocal towns: a “city” and a “wic” or some sort of extra mural settlement in the immediate vicinity, each of which fulfilled different functions. In Gaul, it has been suggested that suburban monasteries could have played this role. The pair of Lundenburgh and Lundenwic and in Francia the double-centred towns like Tours, Arras, Reims and some others keep the question alive.

The division of functions would then be based on anthropological as well as on political or economical reasons. Anthropological reasons refers here to inclusion and exclusion, some sort of segregation.
The functional disjunction ceased in the 9th-10th centuries. By 900 Winchester had a population of craftsmen working inside the walls, if we may judge from street names. Possibly these were the people of the settlement of Hamwic who were moving into the "city" of Winchester? At the same time, famous trading settlements, *emporia* like Dorestad or Quentovic in Gaul were being replaced by the long-term medieval towns of Deventer and Montreuil which were to fit the new economic system.
At the same time also, in central Gaul the Dead ceased to be buried outside the town and parish cemeteries started to be established around churches in a new urban context.
If that division of functions actually occurred, there is no point in looking for evidence of production structures or cemeteries in traditional walled towns of Gaul. They never were there.

The question of the nature of the evidence

The Late Roman and Early Medieval evidence, whether written, architectural or archaeological remains very controversial as far as spatial analysis is concerned.
For ecclesiastical foundations and thus Christian topography the Loire region is certainly one of the best documented regions. And there is a conjunction between the concerns of written sources and the investment in architecture. Notably thanks to the sixth-century historian and bishop Gregory of Tours, the process of what we call *christianising the urban space* appears well described, all the more that the sources overlap.
Founding of and donations to churches or monasteries by the kings, their families, their relatives or by the bishops themselves, all of them being immensely wealthy, appear then to be the main urban activity according to the available evidence.

At the same time it is obvious that the inherited Roman *civitas* capitals were challenged for the exercise of civil power by scattered royal and aristocratic palaces which were temporary residences for itinerant courts. A fundamental change occurred in the exercise of power, now based on the establishment of personal relationships, as the state almost became the private property of the Frankish kings. The extent of the practice of gift as a means of government and its implications for the lands owned by the rulers, the countless estates given to churches from the public fisc, as well as the division of the kingdoms among royal heirs underline this change.

But the surviving architecture as well as the written sources are both of the same ecclesiastical origin, and they stress the maintenance of Roman traditions and territories even as actual practices appear to contradict that. Modern historical research has also concluded that the Barbarians newcomers had all been rapidly assimilated into a Gallo-Frank society. This might be true of the elite of the elites, but is it true for the rest?
What has just been said about government by personal relations does not fit the standards of the previous Roman administration of Gaul. New outside influences must have been very heavy even if they do not appear clearly in the sources. Such subjects which are invisible in the sources lead us to consider many unstated and unimagined aspects of cities.
One major change is that cities were no longer part of a structure aimed at collecting taxes. They were the seat of bishops and of representatives of the kings, such as counts but they certainly were no longer a necessity since the ancient system had been replaced by a new one: with no effective hierarchical system based on territories and a stable administration, the old cities certainly became one choice among others as the appearance of new rural palaces and aristocratic residences show.
The question here is: who lived in towns insofar as the old Roman cities represent towns?
Bishops were certainly forced to stay in cities partly because of their claim for territorial prerogatives and because of the sacred heritage they were in charge of. The cathedral, the churches built on the tombs of saints, the relics, the congregations and monasteries founded by their predecessors or by royal families were also reasons for them to stay. Second rank royal officials too are attested in towns, but they were movable as the geography of kingdoms changed and they did not leave much archaeological evidence.

In general, we know that towns, in order to exist, require at least a hierarchical society if not a stratified one. The presence of elites allows us to infer that the towns were provided all year round in victuals and that social rank could also be expressed by the means of ceremonies and gifts of all sorts. Churches as we know them from the written sources cannot have been the only urban investment of a very wealthy elite, both lay and religious.
Otherwise, the material structure of towns would have decayed and new town plans would have grown up as certain English towns show with their new Late Saxon street grids for instance. One the other hand, in Gaul the overall spatial structure of many medieval towns of Roman origin is based on Late Roman and Early Medieval features, whether or not they were strictly urban.
Large suburban monasteries might well have taken the place of urban structures since they gathered a permanent population, organised their scattered estates and were the centre of long distance systems of exchange. They also took part in long distance trade as artefacts underline. Rural examples of great monasteries which did not develop as towns —examples

like Chelles, Corbie or Saint-Gall-- show that monasteries had to be situated in a favourable context, like Saint-Denis near Paris, to give rise to a town and that, in themselves, they were only a part of the answer.
We certainly have to postulate that towns kept concentrating a large but invisible population.

Archaeological evidence is no less controversial. The recent development of environmental archaeology has revealed the impressive rate of natural transformation of the archaeological evidence by chemical and biological processes and activity in town. The result is that the stratification process can be disturbed and that what archaeologists discover, under certain circumstances, is not what was there at a certain time but in that what was there has been transformed by time.
Schematically, when the layers which formed the stratification were mainly mineral, they did not suffer from post-depositional transformation. This is the case for buildings using stone, mortar, earth, plaster, tiles or bricks like churches or palaces, and for the building material used under the Romans or in the late Middle Ages.
On the other hand, if the layers which formed the stratification stemmed in good part from organic elements, then there could occur an important post-depositional evolution, a taphonomic process which mixed and combined individual layers into what appears as a massive and uniform deposit. This is the case when the buildings were made of wood, wattle, clay, planks, straw and other vegetal, when refuse was not removed or when animal and human manure was collected for gardening purposes. Richard Macphail called this in an expressive way *the reworking of urban stratigraphy* (1994).
The new distinction that these considerations have established between urban stratification and urban soil certainly is one of the major advances of the late 20th cent. It is not certain that the new distinction's historical implications have been fully measured everywhere yet.
The crucial point is that stratification, as archaeologists reconstruct it, is not only an addition. We already knew that there were subtractions (layers missing). Now we realise that there were also provisional subtractions (mixed layers turned into one single layer) in the general adding of layers which simplify the overall profile.

This takes us to dark earth and the falsification of the historical evidence. The question has been addressed in different parts of the western provinces of the Roman Empire: first in England in the early 1980's, then in Italy and later in Northern France/Belgium.
The problem can be easily described.
In towns, Roman and Medieval levels are stratified and so can easily be excavated according to modern standards. However, almost all medieval towns of Roman origin present a layer 1 to 3 or 4 feet thick in-between the well stratified levels. This layer appears dark and not

stratified to the eye. This dark layer has been interpreted as a sign of de-urbanisation, of the ruralisation of ancient towns from the Late Roman to the Medieval times. The question is often considered as solved. Explanations like the importing of soil into towns to facilitate farming are often used.
However a contradiction arises from two points:
- On one hand, there is a real production of soil which raises the level of the ground surface.
- On the other hand, there is the absence of archaeological structures of any kind that modern techniques would discover.
The three regional situations, Britain, Italy, Gaul, are historically very different, yet they all show the dark earth. In common they plead for a drastic cultural change in the life styles and the devolution of space that our methods are unable to reveal.
In Gaul there is starting to appear, where excavation of dark earth is conducted, small groups of tombs sometimes related to rubbish pits or traces of domestic occupation. These settlements/cemeteries in the immediate vicinity of the walled towns are disconnected from the traditional ecclesiastical topography of the Early Middle Ages. They might reveal a rather dense population, certainly of very low social rank, in and around the towns. These people could be in service to the elite and living outside the walls. The traces could also reveal seasonal settlements. We do not know under which social organisation. A rare example comes from Brescia, in Northern Italy, where the presence of very badly preserved traces of housing possibly for unfree people, has been documented.

Dark earth certainly does not avoid the question about the global social structure: it is just that the urban society of the period was organized in a simple hierarchy, elite and dependants, rather than economically stratified. We begin with the elite and numerous people reduced to servitude. Craftsmen were not necessarily totally absent but only a few of them was sufficient for serving the elite and most high-ranking goods could be purchased by trade. They were coming from specialised production centres, perhaps the wics, or trading settlements, or from abroad through the overland and overseas routes Michaël McCormick has described.
This means that both the traditional sources and the soil itself need to be questioned in a different way. We are dealing with a problem of silence and invisibility. If recent results about dark earth do not totally transform the general trend of our knowledge of the Early Middle Ages, nevertheless those dark earth findings are really able to change our approach to the dynamics of towns and their formation.
It is as much a question of numbers as a matter of cultural change, of quantity as well as quality.

Processing the data in a spatial approach to town

Scrutiny of individual towns implies changing any global question about society, whether political or economical, into a social question. At the local level all questions become social as answers involve necessarily social groups acting in a concrete way either to solve a problem or to fulfil particular needs.

Such a methodological posture leads us to formulate differently the questions we put to early towns. For instance it is not the Church as an institution we are interested in here but the way in which individual buildings were located and which successive roles they played in social life. Ecclesiastical or lay investment for social reasons led to an increase of churches for which the bishops eventually had to find some sort of use. Towns of Roman origin have more parochial churches than new medieval towns, and this difference could well be an illustration of this phenomenon.

Towns must be considered as social constructs as well as social products. So the evidence is to be treated in two directions, in two parallel contexts and systems of interpretation.
Related to time, one is horizontal, the other vertical.
One, through *understanding*, is horizontal and deals with a question at a given moment in the past. It observes the town from the inside and is related to the everyday life of the inhabitants. It tries to answer a simple and unique question: what were the aims of actors on the urban scene?
So it needs to look at a moment in the past only as a "present" and as an immediate future and ignore the long-term impact of the decisions of that moment. It requires us to look at the inhabitants of a town as belonging to shifting social configurations rather than as belonging to fixed stable social groups or social classes.

The second aspect, through *explanation*, is vertical and deals with the known impact of decisions, of actions on the townscape. It is based on causality. This explanatory aspect is developed according to questions which are far from the concerns of the people we study. It looks at the town from the outside. It is absolutely necessary for dealing with the urban fabric.

Understanding underlines moments in the individual trajectory of each town and allows us sometimes, when the evidence is favourable, to grasp some aspects of real life in the light of the possibilities that existed and among which people chose. By the means of explanation, we

follow the way in which the urban fabric of a singular town reduced the different opportunities brought to light by the effort to understand into a unique solution over time.
As they have down to us, ancient and medieval towns are not easily readable. Towns are the result of countless projects but they are never the result of one single project because people did not act to produce a town but in order to live in town.

Consequently a town is not an organisation defined as a single entity sharing the same goals and functioning at the scale of the whole. It is a structure of several operational sub-entities in interaction. It must be considered at two time scales, a short-term one for its everyday functioning, and a long-term one for the urban fabric.
Nor is a town simply the sum of specific aspects of its components, like the history of ramparts, that of churches or that of production sites and so on. Specific topographies explain some aspects but ignore interactions among a town's components. Since simply summing up the components of a town ignores how these components interacted, such adding up cannot account for a town.

This logic leads to a preliminary proposal: the reconstructed urban space as a whole is the real and indispensable source to be analyzed for a spatial approach and the individual pieces of evidence coming from excavations, the still-standing buildings, the texts or ancient city plans are to be looked upon as, or compared to, meta-sources. They individually provide evidence for such or such part of the urban space, understood as functional entities, under such and such conditions of reliability.
This leads to the classical question what, where and when? This is what Donna Peuquet called the Triad in her paper of 1994 about GIS. Lots of work have been carried in the past decade on the subject, but not much has been done yet about towns and very little about historic towns.
New developments about ancient towns as a special category of space over time impose a series of new questions to clarify the "what":
- *what,* like *where* and *when* needs sufficient definition or delineation. This is a challenge for the post-Roman centuries we have been talking about.
- *what* is very difficult to define as it must be exclusive. Each entity is to be defined functionally: for instance a chapel is not a church ; a 6th cent. monastery is different from a 9th cent. one, even though the words may be the same. Here stands, as we saw earlier, the main problem confronting the understanding of the situation. The uncertainty of the meaning of the dark earth will also have to be taken into account.

As for the when, the main advantage of GIS so far is to allow us to formulate as detailed queries as necessary so long as the database is sufficient for the needs of research.
Recent research has already increasingly liberated us from the tyranny of periods or centuries. But much thinking is going on everywhere these days about spatio-temporal analysis. Results may be expected in the near future, and they will change our analytical relationship to time.

A most important aspect in the study of a town's functioning and urban fabric comes from the possibility, which will soon become a necessity, of separating historical and geographical entities. This distinction might well be the main contribution of GIS to the history of urban space.
Historical entities must be defined as precisely as possible. They possess and are characterized here by a history that is delineated by their unique function.
Historical entities are functional and significant for social history at the scale of the town or of operational sub-units.
Geographical entities, on the other hand, are composed of individual elements of rather smaller size whose history is not subject to that of the functional, historical entities. As spatial units they must be significant at much finer scale: an example will clarify this. Walls of buildings, for instance, can have an individual history or trajectory, or life span, different from those of the successive buildings they belong to. They are independent and autonomous over time. Some walls are suppressed, some are reused at several occasions for different purposes.
Most building walls which once existed in a town are no longer visible but even so they have shaped the structure of town blocks or of the linear organisation of urban space. Over time these spatial entities produce data which shapes the urban fabric.
I would propose then that urban fabric can then be defined as what goes independently of the inhabitants' intentions, as an unsuspected result of their actions. And that is my thesis, my main argument to suggest that if towns did not act, they existed materially, independently of their inhabitants.

The contradiction between two essential propositions can thus be resolved: on one hand, the proposition that the town is a totally social product, on the other, the proposition of the autonomy of the urban fabric over time.

By distinguishing functional entities from spatial ones, we can address the necessarily twofold history of towns, the horizontal aspect and the vertical aspect, by understanding and explanation, according to town functioning and urban fabric.

As a provisional conclusion I would say that in this distinction certainly lies a better understanding of the space-time of towns, of towns over time and space and that medieval archaeology has a prominent role to play in that matter.

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